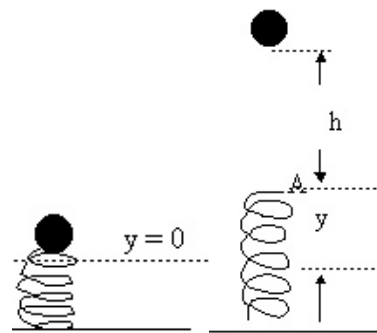


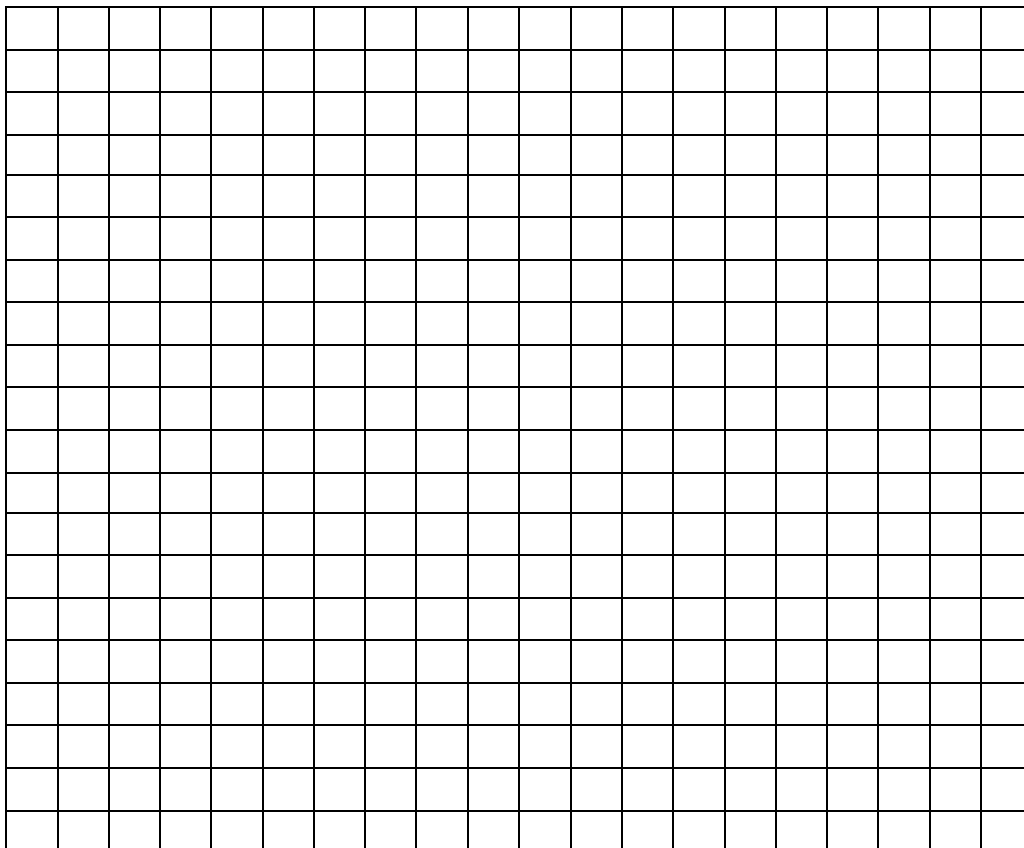
Graphing Practice: *Getting to Proficient*

A student used a spring to fire a ball straight up into the air. During each trial the student measured the amount that the spring was squeezed before it is let go and the speed of the ball as it flies into the air. The student's data is shown below.



1. [1.3 & 1.7] Graph the data provided by the student.
Be sure to start your graph from the origin!

Squeeze of Spring (cm)	Speed of Ball (m/s)
25	164
30	195
36	232
43	276
52	331



2. [1.4] Determine the Y-intercept of the data? _____
3. [1.4] What is the meaning of the Y-intercept?
4. [1.4] Determine the slope of your graph. Show your work.
5. [1.4] What is the meaning of the slope of the graph?
6. [1.1] Starting with the energy inside of the student, trace the energy flow until the ball gets to the **top of its flight**.
7. [1.1] Should the Y-intercept be (0,0)? Explain your answer.
8. [1.1 & 1.8] Is energy lost during the process of firing the ball? If, not explain why not. If so, explain where the energy is goes.
9. [1.8] Does the “Law of Conservation of Energy” apply to firing a ball with a spring? Explain.